

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Haselbeck, R. <i>et al.</i>		Confirmation No.:	7191
Serial No.:	09/815,242	Case No.:	E1025Y	Art Unit: 1635
Filed:	March 21, 2001		Examiner:	Terra C. Gibbs
For:	IDENTIFICATION OF ESSENTIAL GENES IN PROKARYOTES			

Commissioner for Patents  
P.O. Box 1450  
Alexandria VA 22313-1450

RESPONSE TO REQUEST FOR INFORMATION UNDER 37 C.F.R. §1.105

Sir:

This communication is in response to the Request for Information mailed January 19 2010 which set a two-month period for response that expires on March 19, 2010.

The Examiner has requested that Applicants demonstrate where the support for the presently pending claims exists in the priority applications. Applicants believe that the earliest priority document (*i.e.*, US Provisional Application No. 60/191,078) fully supports the presently pending claims.

The presently pending claims are drawn to methods of screening candidate compounds for the ability to decrease cellular proliferation using sensitized test cells. Test cells are sensitized by decreasing the activity and/or expression of a gene product needed for

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proliferation by providing a sublethal level of an antisense nucleic acid that targets the gene product required for proliferation.

The pending claims are directed to sensitizing the cells used in the assay by decreasing the activity/expression of yphC. Pending claims either specify the sequence of the antisense nucleic acid to be used in the assay (*i.e.*, SEQ ID NO:1463 of US Serial No. 09/815,242), the gene product whose activity/expression is to be reduced (*i.e.*, SEQ ID NO:12600 of US Serial No. 09/815,242) or the nucleic acid that encodes the gene product to whose activity/expression is to be reduced (*i.e.*, SEQ ID NO:4228 of US Serial No. 09/815,242).

The earliest priority document (*i.e.*, US Provisional Application No. 60/191,078 filed March 21, 2000) discloses such an assay to identify compounds that decrease cellular proliferation using sensitized cells (see page 6, line 22 to page 8, line 4 and Example 8B of US Provisional Application No. 60/191,078). Furthermore, the yphC antisense sequence was identified as a sequence that could sensitize cells. SEQ ID NO:77 in US Provisional Application No. 60/191,078 corresponds to SEQ ID NO:1463 of US Serial No. 09/815,242. Although the sequences of the yphC gene or its encoded gene product are not specifically recited in the Sequence Listing of US Provisional Application No. 60/191,078, their identity could have been discovered by one of skill in the art using techniques known in the art. In fact, such protocols are described in the specification of the priority document (see, e.g., page 21, lines 9-21 and Example 3 of US Provisional Application No. 60/191,078). Additionally, one can see that SEQ ID NO:1463 of US Serial No. 09/815,242 is the reverse complement of nucleotides 122-508 of SEQ ID NO:4228 of US Serial No. 09/815,242. Thus, the antisense nucleic acid would hybridize to the yphC gene and be able to be used to identify the yphC gene - a technique used at

the time of filing the earliest provisional application (*i.e.*, March 21, 2000). Once the gene sequence was known, one skilled in the art could easily determine the amino acid sequence of the encoded gene product using techniques known in the art.

Applicants would like to clarify that SEQ ID NO:12600 of US Serial No. 09/815,242 is actually encoded by SEQ ID NO:8502 rather than SEQ ID NO:4228. SEQ ID NO:4288 encodes SEQ ID NO:5283. SEQ ID NO:5283 differs from SEQ ID NO:12600 in that the former is truncated by one amino acid as compared to the latter. Thus, SEQ ID NOs:5283 and 12600 differ by the addition of one C-terminal amino acid and SEQ ID NOs:4228 and 8501 differ by the addition of one coding codon and a termination codon.

SEQ ID NO:718 in US Provisional Application No. 60/242,578 (filed October 23, 2000) corresponds to SEQ ID NO:5283 of US Serial No. 09/815,242.

SEQ ID NOs:12600, 8502, 4228 first appear in a Sequence Listing in US Serial No. 09/815,242, however, Applicants believe that their sequences could have been identified using the yphC antisense molecule.

### **Conclusion**

It is believed that the claims are supported by the disclosure in the earliest priority document (*i.e.*, US Provisional Application No. 60/191,078). Favorable action by the Examiner is earnestly requested.

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**Authorization**

No fee is believed to be due. However, The Commissioner is hereby authorized to charge any fees which may be required for consideration of this Amendment to deposit account 13-2755.

Respectfully submitted,

Dated: March 19, 2010

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